

IN THE CLAIMS

Claims 1-42 (Canceled)

43. (Canceled)

44. (Currently Amended) The imaging system as claimed in claim 48 43,
further comprising:

a color filter array positioned over said two-dimensional array of photosensors.

45. (Currently Amended) The imaging system as claimed in claim 44,
wherein said color filter array comprises a plurality of color filter areas, each color filter
area being associated with a corresponding photosensor and having a center point;

said color filter area being positioned over said corresponding photosensor such
that said center point of said color filter area is offset from said center point of said
corresponding photosensor, each offset having an amount and a direction such that said
amounts and directions spatially vary across said two-dimensional array of photosensors;

said spatial variation also being determined based on ~~optical characteristics of said
non-telecentric lens and optical properties of said two-dimensional array of photosensors~~
and said color filter areas such that crosstalk is minimized.

46. (Canceled)

47. (Currently Amended) The imaging system as claimed in claim 48 46,
wherein said aperture is positioned over said corresponding photosensor such that said
center point of said aperture is offset from said center point of said corresponding

photosensor, each offset having an amount and a direction such that said amounts and directions spatially vary across said two-dimensional array of photosensors;

said spatial variation also being determined based on ~~optical characteristics of said non-telecentric lens and optical properties of said two-dimensional array of photosensors~~ and said apertures such that stray light signals are minimized.

48. (Currently Amended) ~~The imaging system as claimed in claim 46,~~

An imaging system, comprising:

a two-dimensional array of photosensors, each photosensor having a center point;

a non-telecentric lens positioned over said two-dimensional array of photosensors;

and

a two-dimensional array of microlenses positioned over said two-dimensional array of photosensors, each microlens being associated with a corresponding photosensor, each microlens having a center point;

said microlens being positioned over said corresponding photosensor such that a center point of a microlens is offset from a center point of a corresponding photosensor, each offset having an amount and a direction such that said amounts and directions spatially vary across said two-dimensional array of photosensors,

said spatial variation being determined based on a variation of a chief ray angle of said non-telecentric lens across a focal surface of the non-telecentric lens and optical properties of said two-dimensional array of photosensors and said microlenses such that light sensitivity of each pixel is maximized; and

a layer of transmissive apertures positioned over said two-dimensional array of photosensors, each aperture being associated with a corresponding photosensor and having a center point, wherein said layer of transmissive apertures is a metal layer of apertures such that the metal layer blocks stray radiation and the apertures allow radiation

to pass therethrough.

49. (Canceled)

50. (Canceled)

51. (Currently Amended) The imaging system as claimed in claim 52 ~~50~~, wherein said aperture is positioned over said corresponding photosensor such that said center point of said aperture is offset from said center point of said corresponding photosensor, each offset having an amount and a direction such that said amounts and directions spatially vary across said two-dimensional array of photosensors;

said spatial variation also being determined based ~~on optical characteristics of said non-telecentric lens and optical properties of said two-dimensional array of photosensors~~ and said apertures such that stray light signals are minimized.

52. (Currently Amended) ~~The imaging system as claimed in claim 50,~~ An imaging system, comprising:

a two-dimensional array of photosensors, each photosensor having a center point;

a non-telecentric lens positioned over said two-dimensional array of photosensors;

and

a color filter array positioned over said two-dimensional array of photosensors, said color filter array including a plurality of color filter areas, each color filter area being associated with a corresponding photosensor and having a center point,

said color filter area being positioned over said corresponding photosensor such that said center point of said color filter area is offset from said center point of said corresponding photosensor, each offset having an amount and a direction

such that said amounts and directions spatially vary across said two-dimensional array of photosensors, and

said spatial variation being determined based on a variation of a chief ray angle of said non-telecentric lens across a focal surface of the non-telecentric lens and optical properties of said two-dimensional array of photosensors and said color filter areas such that crosstalk is minimized; and

a layer of transmissive apertures positioned over said two-dimensional array of photosensors, each aperture being associated with a corresponding photosensor and having a center point, wherein said layer of transmissive apertures is a metal layer of apertures such that the metal layer blocks stray radiation and the apertures allow radiation to pass therethrough.

Claims 53-56 (Canceled)

57. (New) The imaging system as claimed in claim 48, wherein the metal layer is a top-level metal layer of a plurality of metal layers.

58. (New) The imaging system as claimed in claim 48, wherein the metal layer is an intermediate-level metal layer of a plurality of metal layers.

59. (New) The imaging system as claimed in claim 48, wherein the metal layer is substantially planar.

60. (New) The imaging system as claimed in claim 48, wherein said layer of transmissive apertures further comprises one or more other metal layers in addition to the metal layer forming a plurality of metal aperture layers such that the plurality of metal aperture layers allow radiation to pass therethrough while blocking stray radiation.

61. (New) The imaging system as claimed in claim 52, wherein the metal layer is a top-level metal layer of a plurality of metal layers.

62. (New) The imaging system as claimed in claim 52, wherein the metal layer is an intermediate-level metal layer of a plurality of metal layers.

63. (New) The imaging system as claimed in claim 52, wherein the metal layer is substantially planar.

64. (New) The imaging system as claimed in claim 52, wherein said layer of transmissive apertures further comprises one or more other metal layers in addition to the metal layer forming a plurality of metal aperture layers such that the plurality of metal aperture layers allow radiation to pass therethrough while blocking stray radiation.